

Climate Change and Resilient Livelihoods: CLP's Approach to Reducing the Vulnerability of the Extreme Poor in the Riverine Islands of North-West Bangladesh

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Abstract:

The extremely poor people that live in the chars (riverine islands) of north-west Bangladesh face a wide range of vulnerabilities. Many of these are exacerbated by the changes steadily being identified as the result of climate change. Floods; erosion; lack of access to water, sanitation, basic services; livelihoods that are easily disrupted by disasters; gender-related discrimination; all of these and more are faced by tens of thousands of households living on the chars. Even with hard work and resilience, an erosion event caused by a record-breaking flood can set a family's livelihood and standard of living back by years. Some households simply never recover, living their lives around or even below the extreme poor poverty line.

Climate change is causing a variety of changes to the vulnerabilities that the extreme poor in the chars live with. Flooding, a regular challenge, may become more frequent, more severe and less predictable. Rains may fall earlier, or later; there is likely to be more rain, but sometimes less; and while average temperatures may go up, there may also be harsher and more prolonged periods of cold.

All of these changes highlight the pressing need for resilient livelihoods and reductions in the vulnerabilities that the extreme poor face. CLP's approach to reducing these challenges and promoting resilient livelihoods centres around a multi-sectoral approach to tackle the physical, social and economic impacts of climate change.

On the physical infrastructure side, CLP raises plinths for participants – mounds of engineered earth to get them up off the river bottom. Participants are then provided with improved water supplies and hygienic latrines. Their livelihoods are supported through asset transfers and stipends, as well as support in improved livestock-rearing methods and other diversification activities such as homestead gardens, pit crops and chicken-rearing. A markets component aims to assist entrepreneurial farmers to link more effectively with local markets and further improve their production techniques. Village



Savings and Loans Groups help give participants a safe place to save as well as a place to borrow at reasonable interest rates.

Social development activities help improve the standing of the extreme poor in their communities as well as promote messages around water, sanitation and hygiene, particularly becoming an “open-defecation-free” community. The laws against dowry are highlighted, as are the negative effects of early and child marriage. Health workers are trained and local community clinics are held to improve the health status of communities that have often never had formal, modern healthcare services. Village Development Committees (VDCs) take a frontline in many of these activities and are supported to become sustainable village-level development activist organisations, linking in with local government and other stakeholders such as local NGOs.

A comprehensive monitoring and evaluation programme collects data on all aspects of CLP’s work, illustrating that the approach works and has good sustainability. This evidence suggests that the CLP’s model is potentially replicable to other communities that face similar climate change-related vulnerabilities.

Paper

Introduction

The extremely poor people that live in the chars (riverine islands) of north-west Bangladesh face a wide range of vulnerabilities. Some are related to the simple challenges facing any population that is extremely poor: hunger; poor health; limited income-generating opportunities; lack of basic services such as education; poor infrastructure and sanitation facilities; little influence or ‘voice’ in the community or other power structures; and so on.

Further challenges come from the specific circumstances of living in and among the great and shifting rivers of the Bangladesh delta. Floods; erosion; lack of access to water and sanitation; geographical remoteness leading to lack of access to other basic services; gender-based discrimination; and livelihoods that are easily disrupted by disasters; all of these and more are faced by tens of thousands of households living on the chars.

Many of these challenges are exacerbated by the changes steadily being identified as the result of climate change, leading to chars-dwellers’ vulnerabilities changing and deepening. Women and people living with a disability are more likely to live in extreme poverty and experience worse vulnerability than average. The changes to overall societal-level vulnerabilities will undoubtedly impact these groups hardest.

Flooding, a regular challenge, may become more frequent, more severe and less predictable. Since 1984 there have been six major flooding events, and some indications that they are becoming more regular.¹

Apart from the risk of flooding, such events often have a serious impact on agricultural production. This affects chars-dwellers in at least two ways: price rises for food; and drops in household income as the demand for agricultural labour reduces.

Chars-dwellers are always at risk of erosion, i.e. when the riverine island on which they live is entirely washed away by the flooding river. Many families report having experienced several erosion events in their lifetime; one older lady reported to the author that she had moved due to erosion over 30 times in her life.

Even with hard work and resilience, an erosion event caused by a record-breaking flood can set a family’s livelihood and standard of living back by years. Some households simply never recover, living their lives around or even below the extreme poor poverty line.

Rains may fall earlier, or later; there is likely to be more rain, but sometimes less. These uncertainties again impact on the agricultural calendar and production, with knock-on effects on prices and demand for labour.

¹ Ministry of Environment and Forestry, 2009

Although chars-dwellers live among rivers, nevertheless the north-west of Bangladesh is more prone to periods of drought than other parts of the country. These may become more prolonged in the future, putting pressure on groundwater supplies.

While average temperatures may go up, there may also be harsher and more prolonged periods of cold. For the extreme poor in the chars, particularly the young, the old, and others that have vulnerabilities from poor health, the cold snaps in the winter can be deadly. Most poor chars-dwellers' houses are not built for the cold. Fuel for warmth is expensive when you are extremely poor; some families can afford only the most basic of winter clothing, while others have none. More extreme weather patterns will undoubtedly impact heavily on the extreme poor.

All of these changes highlight the pressing need for resilient livelihoods and reductions in the vulnerabilities that the extreme poor face. The Chars Livelihoods Programme's (CLP) approach to reducing these challenges and promoting resilient livelihoods centres around a multi-sectoral approach to tackle the physical, economic, social and institutional impacts of climate change.

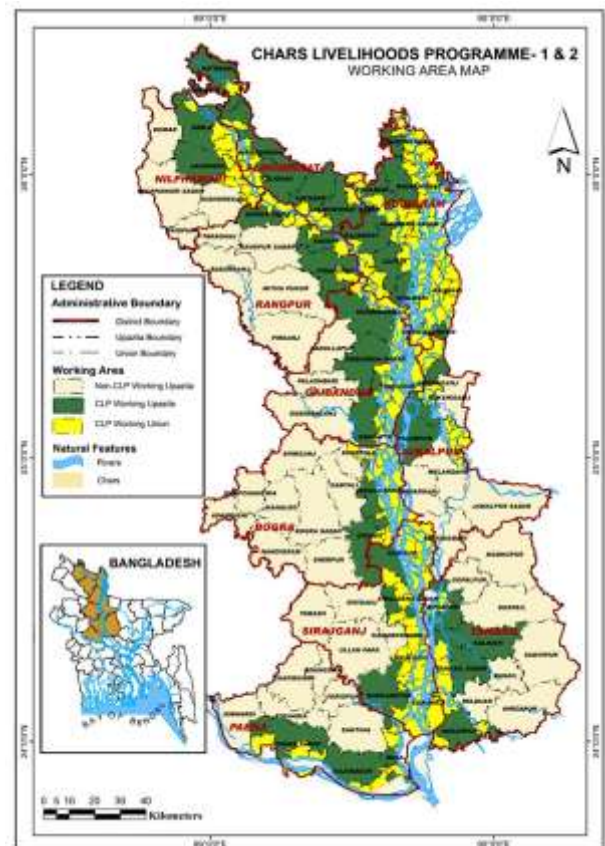
The Chars Livelihoods Programme

The first phase of the Chars Livelihoods Programme (CLP) began in 2004. After about a year, it was recognised that the initial design was flawed, as it focused too heavily on trying to work with local governments that had little capacity to deliver the results required.

As a result, it was redesigned and the "CLP Package" was delivered to 55,000 extreme poor households in four phases (called Cohorts) from 2006 to 2010. It was estimated that up to 900,000 individuals benefited from some aspect of CLP-1, given that some assistance projects had a community focus (Maxwell Stamp 2010). It worked on chars in five districts: Kurigram, Gaibandha, Jamalpur, Bogra and Sirajganj.

The Chars Livelihoods Programme Phase 2 began in April 2010 and will complete in March 2016. It targets approximately 78,000 households; about 23% of the households (HHs) estimated to live permanently on the chars (CLP-2 pers. comm. 2014).

Phase 2's geographical remit includes the Districts of Rangpur, Lalmonhirat, Nilphamari, Pabna and Tangail. Approximately 34% of households in CLP-2 operational districts are estimated to meet CLP's selection criteria (i.e. they are extremely poor).



CLP's support is provided to adult females, even where they are not the household head. This is because:

- many adult males are migratory labourers, sometimes returning to the marital home for only a few weeks per year, therefore being unavailable to look after assets, attend training sessions and so on;
- females are therefore often *de facto* heads of household;
- giving assets and training to women is intended to foster women's empowerment to counter some perceived negative aspects of traditional male-dominated culture in the chars, such as gender-based violence, discrimination against women, dowry and lack of 'voice' for females.

CLP's 'core package of assistance' is provided to participants for an average of 20 months. It comprises the following components:

- The Asset Transfer Project: provides a grant of Tk17,500 (approximately £142) to female participants to purchase an income-generating asset. The grant cannot be spent on consumption or other items, it must be used for an asset that can generate income. The vast majority of participants - over 98% - select cattle. Stipends are also provided to support family consumption and prevent the asset being sold if times turn hard for the family. The asset support stipend of Tk 400 (about £3.25) is provided for six months, while the family support stipend of Tk 350 (about £2.84) is provided for the full period of CLP assistance – usually around 20 months. A comprehensive curriculum of training in livestock management is provided throughout CLP's period of support.
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- CLP supports Livestock Service Providers (LSPs) through capacity-building to provide much-needed para-vet services on the chars. Although not full veterinarians, the LSPs are trained in how to diagnose and treat common livestock illnesses on the chars. As private sector actors, once CLP completes its assistance, they continue to visit communities to offer services, making their income from sales of drugs and other inputs.
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- Raising plinths (engineered mounds of earth protected by grass and other plant cover) for protection from floods. The plinths, which are usually constructed by members of the local community under CLP's Infrastructure Employment Project (IEP), are built to be at least 60cm above the highest known flood level in the area.
 - Participant households receive subsidies to install improved water sources, and all village households are assisted to construct sanitary latrines, whether or not they are Core Participant Households (CPHHs).

- Fortnightly health clinics are provided. As well as primary healthcare and family planning services, CLP provides deworming tablets, iron/folic acid tablets for pregnant or lactating women, and micronutrient supplements to children.

- Char Shasthya Karmis (CSKs), or Village Health Workers, are also supported through capacity-building. Like the LSPs, these CSKs are trained in providing basic health services and can provide common non-prescription medications. They also continue to provide community-based health services once CLP completes its work.



- Given that most participants choose cattle as their asset, the livestock market and value chain is a critical component of a livelihood.

The CLP implements a market development project focused on the meat and milk markets, with the aim of linking small-scale producers with both input providers and buyers. Along with training in better livestock production practices, the aim is to promote efficient commercial approaches to livestock rearing, milk production and marketing so that the markets work better for people on the chars.

- CLP provides support for diversification of livelihoods, through the provision of materials and training in homestead gardening as well as pit crops. Participants can also invest any leftover amounts from the Asset Transfer Grant in other income-generating assets such as small-stock or poultry. Poultry vaccinators and Model Rearers are also supported to provide services and demonstration plots to improve poultry rearing and management techniques.



- The CLP aims to raise the awareness of char people on a number of social issues, particularly: the status of women and the importance of supporting their empowerment; reducing the practice of dowry and early marriage; promoting healthy hygiene practices; and raising awareness on how to access government services. Each CLP participant attends a weekly social development group meeting throughout the 18-month programme.



- CLP's Partnerships Division aims to bring additional goods and services providers to chars dwellers. For example, CLP has recently connected some of its implementing partners with corporate social responsibility funders to provide additional water points for chars-based families.

Addressing Physical Vulnerabilities

The principal physical vulnerabilities facing char households include flooding, drought and erosion. Climate change is likely to compound the situation by making rainfall patterns more unpredictable and possibly more intense. It may also bring periods of lower-than-usual rainfall.



Flooding in the chars creates great disruption and discomfort. Depending on the severity, households may have to temporarily migrate to raised land on the mainland, or on the char if they are “lucky”.

Assets such as livestock are at risk and, if the household is obliged to temporarily migrate to the mainland, theft becomes a real issue. Hygiene also becomes a problem with some households having to practice open defecation as their latrines become inundated. Water points are also often submerged by flood waters.

CLP has responded by raising households on earthen plinths two feet (0.6 metres) above the highest-known flood level in the village. During the first phase of the Programme 90,000 households were raised; during CLP 2 a further 77,000 households have been targeted, benefiting a total of 670,000 char households.



Being raised on a plinth, the household is able to remain dry, protect their assets and remain on the char throughout the year. The plinth also offers protection to neighbours whose plinths have been inundated. Social capital is thus strengthened.

During January 2015 the Programme conducted a study to assess the performance of these plinths, including those that had been raised several years ago. The results of the study show that:

- 80% of households surveyed are still living on the plinth provided by CLP;
- less than 4% of households experienced flooding after receiving CLP support, compared to over 97% before;
- after receiving CLP support, many fewer CPHHs reported having to deal with the typical problems associated with the seasonal floods, such as moving house (69% less), needing to rebuild/repair their house (88% less), facing problems with cooking (96% less) and finding safe drinking water (82% less);



- just 17% of CLP 1 CPHHs (i.e. those who received their plinth between 4 and 10 years ago) experienced erosion of their CLP plinth. The vast majority of CLP plinths remain intact over time and continue to protect households years after being constructed.

Floods also inundate latrines and water points, unless they are raised above the flood line, creating hygiene issues and the risk of disease.

The Programme helps to address these water and sanitation-related issues. CLP upgrades or constructs new water points, all of which are raised above the highest-known flood level to ensure year-round access to water from an improved water source. This helps during floods, but will also assist the family during droughts. With regards to the problem of open defecation CLP takes a community-wide approach. Both core and non-core households are offered a subsidy to construct a sanitary latrine which, importantly is also raised above the highest-known flood level. This reduces the need to practice open defecation during floods.



Another important area where the Programme builds the resilience of households and communities against floods, erosion etc. is through community mobilisation and knowledge transfer. While receiving CLP support, female participants attend Social Development group meetings for the entire 18 month period. At these meetings participants are taught a variety of modules including disaster preparedness. This module covers multiple hazards including floods, cyclones and fires. These meetings along with other CLP organised meetings (Village Development Committees (VDCs); Adolescent Groups; Couples Orientation; and Men's Training) increase social capital, creating stronger links within villages, allowing for a better coordinated response to disasters.



A recent study, published by the Programme, found that the char communities where CLP had provided support had significantly greater disaster resilience than the control communities. Key findings from the study include:

- CLP dramatically improves the overall disaster resilience of communities in Disaster Preparedness and Response; Knowledge and Education; Governance; and Risk Assessment.
- Women's disaster resilience is greater than men after receiving CLP support.
- Plinths are a vital component of CLP's support.

While the Programme accepts that erosion will happen in the chars, given the size and nature of the rivers that cause it, nevertheless CLP aims to protect its plinths. The sides of the plinth are planted with grasses and other vegetation, including useful crops such as fodder for participants' cattle and

fruit trees. The Programme does not invest in high risk areas of the chars. Those areas that are known for regular and intense flooding are avoided and families encouraged to live elsewhere, if feasible.

Ultimately, the best long-term protection from the negative effects of erosion is economic development. The CLP's asset transfer project aims to economically empower households so that they have the resources to respond appropriately when erosion occurs.

Addressing Economic Vulnerabilities

Significant economic vulnerabilities affecting extreme poor households on the chars are associated with the limited employment opportunities and seasonal fluctuations in demand for employment. Once again, climate change is likely to compound these constraints. Droughts, erratic rainfall and prolonged floods could negatively impact the agriculture sector on which extreme poor households depend so much for their livelihoods.

Historically, the chars have provided grazing grounds for livestock, but have relatively recently become more intensively farmed with crops such as rice, jute, maize, and wheat. The large pockets of extreme poor living on the chars rely heavily on earning their income from agricultural wage labour in and around the chars. When work dries up, however (for example between October and December during the lean season), they are obliged to migrate in search of work.

The CLP aims to diversify and strengthen the livelihoods of 78,000 extreme poor households (equivalent to 0.3 million people) by allowing the female head of the household to select a productive asset (currently valued at Taka 17,500; GBP 145). The vast majority (98%) select cattle for meat production or for dairy. This grant allows the household to grow and diversify its asset base. For example, on entry to the Programme, average household productive assets are valued at just Taka 1,675 (GBP 14). This rises substantially to Taka 51,626 (GBP 429) after CLP support has ended. Participants are also trained in cultivating household garden and pit crops, which can either be consumed or sold for income.



With diversified assets and incomes, households need rely less on having to sell their labour, making them less prone to seasonal income fluctuations. Through its internal monitoring and evaluation system, CLP has found that on average the proportion of income from wage labour reduces from around 75% when households enter the Programme to between 37 and 49% after support has ended. Similarly, the proportion of household income from agricultural production increases from close to 0% to between 20-25% after CLP support ends. Such diversified income sources are crucial in reducing risk and helping households cope with shocks such as erosion.

Addressing Social and Institutional Vulnerabilities

Generally speaking, the chars are remote and inaccessible. Whilst many are stable and have been in existence for decades, others are less stable and in a state of flux. For this reason the chars population is relatively under-served with basic services such as schools, clinics, government extension services, safety nets etc. The private sector is also relatively more averse to investing in the chars as compared to the mainland.

Climate change is, once again, likely to compound such issues. Greater erosion and flooding will make the chars more inaccessible and more risky to invest in.

In response, CLP has introduced a range of interventions. CLP has a Partnership Division tasked with lobbying the Government, non-government and private sector actors to invest and provide basic services in the chars. There have been some notable successes; for example Brac are now providing health services in many phased-out CLP areas.

The Programme has also established village development committees (VDC). Comprising female and male members of the community, the VDCs are formed with the aim of improving social cohesion and to provide an organisation that can lobby local government for better service provision. VDCs have been involved in various success stories: some have helped older members claim pensions or other grants; others have organised the local community to create or improve local infrastructure; and one even helped start a primary school for local children.



CLP also aims to strengthen markets in the meat and dairy sectors. Whilst not specifically targeting the extreme poor, they are likely to benefit e.g. through improved access to inputs and markets to sell their produce. CLP's markets projects have succeeded in linking established market players with chars-based producers, particularly regarding milk production and distribution. The meat markets arena has also seen valuable improvements in both production techniques and linkages to local meat markets.

Less Vulnerable and Moving Out of Extreme Poverty

This paper has explained how CLP provides an integrated package of support that contributes to reducing the physical, economic, social and institutional vulnerabilities of extreme poor households; vulnerabilities which will be heightened with changes in the global climate.

In a less vulnerable position from floods, fluctuations in the demand for labour etc., extreme poor households are in a stronger position to lift themselves out of extreme poverty and cope with the increasing challenges that climate change will undoubtedly bring their way.

During the last ten years, CLP’s Innovation, Monitoring, Learning and Communications Division has generated the evidence base to show that this integrated package of support is effective in lifting households out of extreme poverty.

The Programme collects information from a sample of CPHHs on a range of important and inter-related indicators that can be grouped around the following themes: livelihoods, WASH, women’s empowerment, food security and nutrition. Rather than defining whether a household has been lifted out of extreme poverty based on income alone, which has methodological issues and over-simplifies poverty in the chars, CLP has developed a set of graduation criteria.

The Programme’s graduation criteria relate to the multiple dimensions of poverty (Table 1). To graduate, a household must meet (any) six or more criteria within 3 months of completing the 18 month cycle. These criteria relate to 1) Income/ expenditure/ consumption 2) Nutrition 3) Asset base 4) Status of females 5) Vulnerability and 6) Access to services.



Table 1: CLP’s Graduation Criteria

Domain	Indicators
Income / expenditure/ consumption	1. Household has had more than one source of income during the last 30 days
	2. Household achieves ‘acceptable’ food consumption score
Nutrition	3. Household has access to improved water
	4. Household has access to a sanitary latrine (meeting all sub-criteria)
	5. Presence of ash/ soap near to water point or latrine
Asset base	6. Productive assets worth more than Tk 30,000
Status of females	7. Participant is able to influence household decisions regarding sale/ purchase of large investments e.g. cattle
Vulnerability	8. Homestead is above known flood level
	9. Household has cash savings more than Tk 3,000
Access to services	10. Household has membership of social group

The Programme has found that 85% of households from cohorts 2.1 to 2.4² had graduated at the end of the 18 month cycle of support. This is equivalent to 43,156 households and 167,877 people. Data from the control group, currently Cohort 2.5, shows that, predictably enough, no households meet six of ten graduation criteria when they join the CLP.

² CLP 2 will support 78,000 CPHHs through six annual intakes or Cohorts between 2010 and 2014. Support to each Cohort lasts 18 months.

Criteria that are being met by the vast majority of CPHHs at the end of the 18 month cycle are:

- Household eats three meals a day AND consumes five or more food groups in the past week
- Presence of ash/ soap near to water point or latrine
- Household has membership of social group

Graduation criteria being met by relatively fewer households at the end of the 18 month cycle are:

- Household has cash savings of more than Tk 3,000
- Household has access to improved water
- Productive assets worth more than Tk 30,000

The Programme has also found that these rates of graduation are sustainable. For example, at least two-thirds of participants that joined CLP2 in 2010 still meet graduation criteria³ (Kenward S et al, 2014).

Conclusion

Through the infrastructure component, asset transfer project and social development projects, CLP is able to help extreme poor households living on the chars protect themselves from current vulnerabilities as well as increase their resilience to likely future climate change-induced shocks.

With increased incomes, improved asset bases and diversified livelihoods, households will be better-able, in the event of disaster, to afford coping strategies that do not tip them back into extreme poverty. Households are able to move away from a heavy reliance on agricultural wage labour, which is already seasonal and is likely to become less predictable in the future. With CLP support, households can derive a higher proportion of their income from land and agricultural produce (crops and livestock) and are therefore likely to be a better position to weather shocks such as flood, erosion or family illness.

Equally important and inter-related aspects of a climate-resilient sustainable livelihood are WASH outcomes, women's empowerment and food security – all areas where CLP has seen impressive results.

With 85% of core households meeting six out of ten graduation criteria, the vast majority of CLP participants are therefore on the right trajectory out of extreme poverty and towards livelihoods that can cope with the vagaries of climate change.

³ For methodological reasons, this is likely to be an under-estimate.

Barrett A et al; Impact of the Chars Livelihoods Programme on the Disaster Resilience of Chars Communities, January 2014; Bogra, Bangladesh

Kenward S and Hannan M; Graduation: Results for Cohorts 2.1 to 2.4, November 2014; Bogra, Bangladesh

Ministry of the Environment and Forests, Government of Bangladesh, 2009; Bangladesh Climate Change Strategy and Action Plan; Dhaka, Bangladesh

Maxwell Stamp (2010); Final Report, Chars Livelihoods Programme Bangladesh; London, UK